

REMARKS

Applicants appreciate the Examiner's thorough examination of the present application as evidenced by the Office Action of November 3, 2004 (hereinafter "Office Action"). In response, Applicants have amended independent Claims 1, 8, 16, 20, and 43 to correct various antecedent basis errors to ensure that the Claims satisfy the requirements of 35 U.S.C. §112. In addition, Applicants have amended independent Claim 34 to incorporate the recitations of dependent Claim 36, which has been indicated as being allowable. Applicants have also canceled Claims 31 - 33 and 38 - 42 without prejudice or disclaimer. Applicants respectfully submit that the cited reference does not disclose or suggest, at least, the recitations of the pending independent claims. Accordingly, Applicants submit that all pending claims are in condition for allowance. Favorable reconsideration of all pending claims is respectfully requested for at least the reasons discussed hereafter.

The Title

The Office Action states that the present title is not descriptive. Applicants maintain that the present title is descriptive of the claimed subject matter. If the Examiner maintains this objection to the title, then Applicants respectfully request that the Examiner point out why the title is imprecise and/or suggest an alternative title to assist Applicants in understanding the alleged deficiency in the present title.

The Drawings

Applicants have amended FIG. 6A to label this figure as prior art as required in the Office Action. A replacement drawing sheet is attached.

The 35 U.S.C. §112 Rejections

Various claims stand rejected under 35 U.S.C. §112 as being indefinite due to antecedent basis errors. In response, Applicants have amended independent Claims 1, 8, 16, 20, and 43 to correct the antecedent basis errors to ensure that all pending claims satisfy the requirements of 35 U.S.C. §112.

Independent Claims 1, 14, and 43 are Patentable

Independent Claims 1, 14, and 43 stand rejected under 35 U.S.C. §102(e) as being anticipated by U. S. Patent No. 6,438,670 to McClannahan (hereinafter "McClannahan"). Independent Claim 1 is directed to a memory device controlled by a memory controller and recites, in part:

...
a delay control register for receiving delay control information from the memory controller and storing the received delay control information; and
...

Thus, according to independent Claim 1, delay control information is received from the memory controller and stored in a delay control register at the memory device. Claims 14 and 43 include similar recitations.

In rejecting independent Claims 1, 14, and 43, the Office Action cites the configuration register 26 shown in FIG. 1 of McClannahan as corresponding to the delay control register recited in Claim 1. Applicants submit, however, that the configuration register 26 shown in FIG. 1 of McClannahan is associated with a memory controller 10, not a memory device that receives delay control information from a memory controller as recited in Claims 1, 14, and 43.

Accordingly, for at least the foregoing reasons, Applicants respectfully submit that independent Claims 1, 14, and 43 are patentable over McClannahan and that Claims 2 - 13, 15, and 44 are patentable at least per the patentability of independent Claims 1, 14, and 43.

Independent Claims 3, 8, 16, 20, and 24 are Patentable

Independent Claims 3, 8, 16, 20, and 24 stand rejected under 35 U.S.C. §102(e) as being anticipated by McClannahan. Independent Claim 3 is directed to a memory controller for controlling memory modules and recites, in part:

...
a delay control register for receiving delay control information according to a specification from serial presence detectors (SPD) loaded into the memory modules and storing the received delay control information; and
... (Emphasis added.)

Thus, according to independent Claim 3, the memory controller comprises a delay control register that receives delay control information from one or more memory modules. The delay control information is stored in SPDs that are loaded into the memory modules. Claims 8, 16, 20, and 24 include similar recitations.

The Office Action cites the passage at column 8, lines 42 - 51 of McClannahan as disclosing the concept of serial presence detectors in memory modules and the configuration register 26 shown in FIG. 1 of McClannahan as disclosing the concept of storing delay control information at a memory controller. Applicants submit, however, that McClannahan does not appear to disclose storing delay control information at the memory controller that is received from one or more memory modules. McClannahan explains that the configuration register 26 in the memory controller 10 may be programmed in the following ways:

Loading of the configuration register to program the programmable counter may be performed in a number of manners. For example, one or more external pins for the controller may be used to specify the delay count. In the alternative, the delay count may be supplied via an external component, e.g., via a specific instruction over a network or bus. Moreover, the delay count may be hardwired into different physical implementations, whereby a common design of memory controller may be reused with minor modifications in the manufacture of several different memory controller models tailored for use with different memory storage requirements. Furthermore, delay counts may be grouped into sets so that the same pins/commands may collectively control multiple parameters. (McClannahan, col. 6, lines 44 - 57).

McClannahan does not describe or suggest programming the configuration register 26 using information received from one or more memory modules.

Accordingly, for at least the foregoing reasons, Applicants respectfully submit that independent Claims 3, 8, 16, 20, and 24 are patentable over McClannahan and that Claims 4 - 7, 9 - 13, 17 - 19, 21 - 23, and 25 - 30 are patentable at least per the patentability of independent Claims 1, 14, and 43.

Independent Claim 34 Patentable

Independent Claim 34 has been amended to incorporate recitations from dependent Claim 36, which has been indicated as reciting patentable subject matter in the Office Action. Dependent Claim 36 has been canceled without prejudice or disclaimer. Accordingly,

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Applicants respectfully submit that independent Claim 34 is patentable over McClannahan and that Claims 35 and 37 are patentable at least per the patentability of independent claim 34.

CONCLUSION

In light of the above amendments and remarks, Applicants respectfully submit that the above-entitled application is now in condition for allowance. Favorable reconsideration of this application, as amended, is respectfully requested. If, in the opinion of the Examiner, a telephonic conference would expedite the examination of this matter, the Examiner is invited to call the undersigned attorney at (919) 854-1400.

Respectfully submitted,



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CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to Mail Stop Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on May 3, 2005.



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